

A QUICK GUIDE TO THE SCIENTIFIC INTEGRITY POLICY AT THE

National Aeronautics and Space Administration (NASA)



Brought to you by the Climate Science Legal Defense Fund

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INTRODUCTION

A Quick Guide to the NASA Scientific Integrity Policy

Scientific integrity principles are indispensable to the missions and the functions of scientific federal agencies in the United States. Conducting sound and unbiased scientific research is essential to maintaining public trust in these agencies. For scientists employed at these agencies, understanding these principles—both how to abide by them, and what to do if they are violated—is a core job function.

Many scientific agencies adopted scientific integrity policies following a 2009 memorandum issued by President Obama, and a subsequent memorandum issued in 2010 by the White House Office of Science and Technology Policy. A 2021 memorandum issued by President Biden required all scientific agencies to develop scientific integrity policies and specified certain elements, followed in 2022 by a Framework for Federal Scientific Integrity Policy and Practice with additional parameters for scientific integrity policies.

These policies clarify how individual agencies interpret scientific integrity. In many cases, a policy also describes how a scientist should report a loss of scientific integrity, how the agency will investigate such claims, and the rights of both a complainant and a scientist alleged to have committed a violation.

This guide examines the National Aeronautics and Space Administration (NASA) scientific integrity policy. The guide is designed to help NASA scientists understand how the policy applies to them, what rights they have under the policy, and how they can avail themselves of these.

The NASA policy could be significantly strengthened to provide clearer enforcement mechanisms, penalties, and rights of appeal. But it is still crucial for agency scientists to know their rights and responsibilities in respect to scientific integrity, as well as the strengths and weaknesses of the policy.

While this guide helps NASA scientists understand the agency's scientific integrity policy, it is not a substitute for legal advice regarding a particular situation. The Climate Science Legal Defense Fund offers free, confidential consultations to scientists with questions about scientific integrity.

Contact us at (646) 801-0853

Or send an email to lawyer@csldf.org

2 SUMMARY

NASA's scientific integrity policy, <u>NASA Policy Directive (NPD) 1920.1</u>: <u>Scientific and Research Integrity</u> (referred to as the policy and SIP in this guide), states in its introductory statement that scientific integrity is a high priority for the agency, including "upholding and promoting a robust and inclusive scientific environment that is free from all forms of discrimination" (SIP § 1). NASA also has an accompanying <u>Guidelines for Promoting</u>. <u>Scientific and Research Integrity</u>, also known as the Handbook (referred to as the Handbook in this guide), which provides most of the implementation details.

The way the policy addresses public access to scientific data is relatively strong compared to the way some other scientific agencies' policies handle this issue, highlighting NASA's commitment to ensuring access.

3 WHAT DOES THE POLICY GOVERN?

The NASA policy on scientific integrity defines scientific integrity as "the adherence to principles of honesty, objectivity, and transparency; professional practices; and ethical behavior when conducting, managing, using the results of, and communicating about science and scientific activities. Inclusivity and protection from inappropriate influence are hallmarks of scientific integrity" (Attachment A). The scientific and technical integrity standards will apply to "all activities in all research, including, but not limited to, basic research, applied research, and technology development projects" (SIP § 2(a)).

The SIP lacks any real clarity on how scientific integrity is enforced at NASA. Instead, the Handbook has more detailed information about the scientific integrity policy and procedures at NASA.

Research Misconduct

The NASA policy refers to a provision in the Code of Federal Regulations (CFR), 14 CFR § 1275 – Research Misconduct, which describes the procedures NASA uses to handle allegations of fabrication, falsification, or plagiarism in proposing, performing, or reviewing research or in reporting research results for any research funded or supported by NASA.

Research misconduct is defined in the section as "fabrication, falsification, or plagiarism in proposing, performing, or reviewing research or in reporting research results. Research misconduct does not include honest error or differences of opinion" (14 CFR § 1275.101(a)).

Conflict of Interest

NASA civil servants are bound by federal restrictions against conflicts of interest and, as with most federal civil servants, NASA scientists must file annual financial disclosure reports and have annual conflict of interest and ethics trainings (Handbook at § 4(E), 5(E)). The Handbook also states that scientists participating in NASA peer reviews and NASA research, be they NASA employees or external scientists, must follow documented standards for conflicts of interest. It lists several policies relating to conflicts of interest that apply to some or all NASA employees. Links to these policies are included in Section 8 of this guide.

The Handbook also states that all those receiving funding, or who are involved in conduct and dissemination of research, should avoid situations of financial or other interests or give the appearance of a conflict of interest (Handbook § 5(C)).

Political Interference

The Handbook cites 14 CPR § 1213, stating "scientific findings and products must not be suppressed or altered for political purposes and must not be subject to inappropriate influence" (Handbook § 3(B)). The Handbook goes on to state that NASA will "prohibit political interference or inappropriate influence into the design, conduct, management, evaluation, and reporting of scientific data, research and activities" (Handbook § 3(B)(I)(1)).

The results of NASA-funded research, including peer-reviewed publications, must be made available to the scientific community and the public at no cost to them (Handbook § 3(B)(II)). This is also supported by several additional linked policies). The policy additionally requires this scientific and technical information to be "timely, accurate, and unfiltered," and 1) ensures the research and findings of scientists is accurately represented in agency communications, 2) scientific findings are not suppressed or altered for political purposes and are not subjected to inappropriate influence, and 3) prohibits public affairs officers from asking or directing federal scientists to alter scientific findings (Handbook § 3(B)(II)).

Threats and Intimidation

NASA will prevent "supervisors or other Agency leadership from intimidating or coercing scientists to alter scientific data, findings, or professional opinions or inappropriately influencing scientific advisory boards" (Handbook § 3(V)(3)).

Use of Science In Agency Decision-Making

The NASA policy is focused on the dissemination of information rather than policy-making. But it states that one of its goals for strengthening the actual and perceived credibility of government research is "ensuring that data and research used to support policy decisions undergo independent peer review by qualified experts" (Handbook § 8(A)).

Science Communication

Timeliness: The NASA policy states that scientific data will by published in a timely fashion and without unreasonable delay (Handbook § 3(B)(II)(9) and § 3(B)(VI)(1)(a)). It does not state what is considered timely nor what is an unreasonable delay.

Press: The policy states that NASA is committed to promoting and maximizing openness with the media and NASA information must be made publicly available unless a determination is made that public dissemination of information must be prohibited or restricted (Handbook § 3(B)(II)). NASA press policies are detailed in 14 CFR § 1213: Release of Information to News and Media. Details can be found in the CFR, but in summary these include:

- > NASA will offer articulate and knowledgeable spokespersons who can best serve the needs of the media and the public.
- > NASA employees may, but are not required to, speak to the media about their work.
- > An employee who wishes to speak to the media is required notify their immediate supervisor and coordinate with the public affairs office in advance of interviews (wherever possible), or immediately afterwards.
- > Employees are encouraged to have a public affairs officer present for interviews, whose role is intended to be to support the employee.
- > Scientific and technical information about agency programs will be accurate and unfiltered. Edits made by public affairs staff should be done only to ensure public information products are well written and appropriate for the intended audience; they must not change scientific or technical data or content.
- > NASA public affairs officials are expected to act "promptly to notify the public of, and correct erroneous information, either internally or externally."

Social media: When posting on personal social media, an employee may "express their personal views and opinions and may name their agency, in the context of biographical information, as long as it is clear in context that they are not speaking on behalf of, or as a representative of, the agency" (Handbook § 3(B)(II)(12)(a)). If the employee chooses to disclose their affiliation to NASA, a disclaimer that the account or communications represents the employee's personal view is appropriate but not required (Handbook § 3(B)(II)(12)(b)).

Testifying before Congress: While the policy does not explicitly state that agency scientists have a right to testify before Congress, that right is protected elsewhere in federal law. The Handbook only requires that the "responses to Congressional inquiries, Congressional testimony, and other requests that include scientific information accurately represent the science" (Handbook § 3(B)(II)(10).

Right of scientists to review and/or correct agency communications: NASA's policy states scientists will be given the opportunity to review the scientific content of documents not subject to peer review, if the document identifies the scientist as an author, represents their opinion, or significantly relies on the scientist's research (Handbook § 3(B)(II)(4)).

Publishing and lecturing: The policy emphasizes the importance of sharing scientific findings. It encourages NASA scientists to publish in peer-reviewed, professional, and scholarly journals. It also encourages them to present research findings at professional meetings (Handbook § 3(B)(VI)(1)(c)). The policy also points to additional NASA policies concerning the requirements of NASA scientists to publish and present their work (Handbook § 3(B)(VI)).

NASA scientists are allowed to serve as editors or editorial board members for professional or scholarly journals; this type of service is encouraged when "consistent with Federal rules of ethics, job responsibilities, and to the extent practicable given the availability of funding to support such interactions and any budgetary restraints" (Handbook § 3(IV)(1)).

Scientific societies: NASA allows scientists to fully participate in professional societies (Handbook § 3(IV)(1)(e)).

Opinion statements: NASA's policy allows for scientists to express their personal views and opinions; however, they cannot "claim to represent the Agency or its policies or use the Agency or other U.S. Government seals or logos" (Handbook § 3(B)(II)(6)). The section of the CFR on Release of Information to News and Information Media also implies that scientists have the right to communicate their personal opinions publicly when it states that "NASA employees who present personal views outside their official area of expertise...must make clear that they are presenting their individual views—not the views of the Agency..." (14 CFR § 1213.105(d)).

Hiring practices

NASA recognizes the importance of "ensur[ing] that the selection of candidates for scientific positions in the executive branch is based primarily on their scientific and technological knowledge, credentials, experience, and integrity" (Handbook § 4A)). The section of the Handbook that addresses hiring practices also links to other policies that bolster this commitment by requiring that NASA fill positions available only to internal candidates through competition and on the basis of merit, and also use competitive practices for outside hiring (Handbook § 4(A)).

Federal Advisory Committees

Unlike some other scientific agencies, NASA explicitly addresses federal advisory committees as part of scientific integrity (Handbook § 3(B)(VII)). While the policy does not dictate specific procedures for the functioning of the committees or the selection of committee members, NASA does emphasize that selection of members should be based on expertise, knowledge, and contribution to the relevant subject area (Handbook § (3)(B)(VII)(3)). There are also provisions aimed at ensuring the advisory committees function transparently; it requires, for example, that member vacancies should generally be announced widely so as to include the public in the process, and that professional biographical information about members should be made public, as should instances in which a member is granted a conflict-of-interest waiver.

Whistleblower Protections

The NASA policy states that it is committed to implementing existing whistleblower protections in the Whistleblower Protection Act and the Whistleblower Protection Enhancement Act (Handbook § 4(D)). NASA has also developed a <u>Whistleblower Protection Plan</u> that spells out alternative reporting procedures and lists educational opportunities for employees regarding whistleblower protections.

4 WHO DOES THE POLICY GOVERN?

The NASA policy is "applicable to NASA Headquarters and NASA Centers, including Component Facilities, and Technical and Service Support Centers. [It] applies to the contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements. [It] also applies to Special Government Employees, temporary employees, detailees under the Intergovernmental Personnel Act and other agreements, and volunteers" (SIP § 2(b)).

The different policies it links to also specify who they apply to; the most relevant example being the rules for dealing with allegations of research misconduct. Those rules apply to research funded wholly or partially by NASA which "includes any research conducted by a NASA installation and any research conducted by a public or private entity receiving NASA funds or using NASA facilities, equipment or personnel" (14 CFR **§ 1275.100(b)).**

5 WHAT IS THE PROCESS FOR FILING A COMPLAINT?

This guide is not a substitute for legal advice about any specific situation. If you are considering filing a scientific integrity complaint, or are the subject of a complaint, please contact the Climate Science Legal Defense Fund or another attorney for advice about your particular circumstances. Nonetheless, we will provide below general information about what the process may entail.

NASA's policy provides the broad procedures and general guidance for addressing scientific integrity concerns and lays out a rudimentary life-cycle of investigations into breaches of scientific integrity (Handbook § 7).

Who can make a claim under policy?

The Handbook does not explicitly state who can file a claim. However, it states all employees, contractors, cooperators, partners, co-regulators, permittees, lessees, grantees, and volunteers are covered by the policy (Handbook § 2).

Where and how can a scientist make a claim?

A complaint alleging a violation of scientific integrity may go to a supervisor, an Ombudsperson, a representative of Office of Chief Scientists (OCS), Office of the Chief Human Capital Officer (OCHCO), Office of General Counsel (OGC), or Office of Diversity and Equal Opportunity (ODEO), or – at each of the NASA field centers – directly to the Center Scientific Integrity Officer (SIO) (Handbook § 7(A)(1)).

What should a complaint contain?

The Handbook does not specify what a complaint should contain.

Is there a deadline for filing a complaint?

The Handbook does not specify how long the person making the complaint (known as the complainant) has after learning of the alleged research misconduct to file a complaint.

6 WHAT HAPPENS AFTER A COMPLAINT IS FILED?

Who investigates?

NASA states that complaints will ultimately be received by the Center Scientific Integrity Officer (SIO), starting Phase I of the process. The SIO is a career employee with a permanent tenured appointment, and has appropriate scientific credentials appointed at a senior level (Handbook § 6(C)). The SIO will oversee the implementation of iterative improvement of scientific-integrity policies and processes providing leadership, lead training and outreach initiatives, and conduct investigations on allegations. The Center SIO will determine whether the allegation involves potential research misconduct, in consultation with the relevant OIG representatives. If the Center SIO finds the allegations rise to a level of scientific misconduct, the case will be referred to the NASA OIG.

The Center SIO may choose to investigate the allegation further for other types of scientific integrity violations, even if the OIG chooses not investigate further (Handbook § 7(A)(1)). In this situation, the SIO will begin an initial fact-finding phase, Phase II. The SIO will start by interviewing the complainant and collecting any additional information or documentation the complainant may have. If the SIO feels it is needed, the SIO will collect additional evidence, including the potential of involving other organizations. If this occurs, the SIO will write a collaboration plan (Handbook § 7(A)(2)). The SIO will evaluate the information gathered and make a judgement of whether an investigation is merited.

If an investigation is warranted, and involves other organizations, the SIO will write up a collaboration plan similar to the one in the fact-finding phase, which starts Phase III. If the allegations require immediate action, the SIO will determine what actions are required and whether others need to be involved and implement those actions. After this, the SIO will create an investigation plan, including a panel of subject matter experts if needed. It is during this phase the SIO interviews the respondent and collects any evidence from them. After gathering the respondent's side and evidence, the SIO should be able to make a judgment whether there was a scientific integrity violation (Handbook § 7(A)(3)). If the Center SIO is unable to reach a decision, the case will be elevated to the Agency SIO for agency review.

There are a wide range of circumstances under which an agency review can occur and possible actions taken, Phase IV. This "includes, but is not limited to, an appeal having being filed, and or a hearing having been requested; the need for additional evidence unavailable to the Center SIO handling the case; or the outcome highlighting the need for a change in Agency Policy" (Handbook § 7 (A)(4)).

Is the confidentiality of the parties protected?

The SIO will "take all reasonable steps to ensure the privacy of the involved parties and maintain confidentiality regarding the complaint" (Handbook § 7(A)(5)). Unless required by law, the SIO "will not unduly disclose the name(s), organization(s), title(s), or other identifying details of any party; nor will the SIO unduly disclose fact, evidence, or details related to the case" (Handbook § 7(A)(5)).

How long will the investigation take?

NASA does not specify a timeline for other scientific integrity violation allegations.

Do the parties have a right to a hearing?

In a scientific integrity investigation, the SIO will interview the respondent, and also advise them on methods for hearings or appealing the findings (Handbook § 7(A)).

Do the parties have a right to respond to the findings of the investigation?

The Handbook does not state if either party has a right to respond to the findings of the investigation outside of the appeal processes.

7 WHAT HAPPENS ONCE THE INVESTIGATION ENDS?

For all other scientific integrity violation allegations, the SIO will produce a summary report, notify all relevant stakeholders, and inform the respondent about the appeal process if warranted. The abstract of the case will be submitted to that year's annual report. The annual report will include the number of complaints, the investigations and their outcomes, and any pending appeals (Handbook § 7(A)(3)).

If a loss of scientific integrity is found, who decides what the resolution/remedy should be?

The SIO decides on any actions or remedies needed for compromised scientific integrity and will work with relevant management or other stakeholders to implement them.

Do the parties have the right to appeal if initial decision is not in their favor?

For scientific integrity investigations, the SIO produces a summary report which is sent to all relevant parties, including the respondent. The Center SIO will inform the respondent how to request an appeal if necessary. If there is an appeal filed, that will start an agency review, handled by the Agency SIO (Handbook § 7(A)(4)). There is no indication whether the complainant can appeal if the decision is not in their favor.

What are the penalties for misconduct?

Table 2 of the Handbook lists a few examples of potential penalties:

- > Performance improvement plans
- > Suspension
- > Reduction in grade
- > Reduction in pay
- > Furlough
- > Removal

The Handbook states that actions will vary from case to case depending on the circumstances (Handbook § 7(A)).

8 WHAT IS THE PROCESS FOR A RESEARCH MISCONDUCT COMPLAINT?

Research misconduct refers to the actual conduct of scientific research, a narrower concept than scientific integrity.

Allegations of scientific misconduct associated with research funded by NASA are thoroughly investigated, as outlined in 14 CFR § 1275. Under 14 CFR § 1275, allegations may be made by mail to the NASA Office of Inspector General (OIG), via the OIG hotline, or the OIG cyber hotline. Allegations concerning awardee institutions may be made directly to that organization or to the OIG. To the extent possible, the identity of sources who wish to remain anonymous are to be kept confidential, and files are to be treated in such a way as to exempt them from disclosure under the Freedom of Information Act (14 CFR § 1275.104(e)).

When the case is before the NASA OIG, according to 14 CFR § 1275, the OIG must begin by determining whether the complaint has described an allegation of research misconduct that falls under its jurisdiction; that is, the OIG must determine whether the allegation: 1) concerns either NASA research or research being conducted by an awardee institution/in collaboration with another institution, and 2) meets the definition of research misconduct (14 CFR § 1275.102 (a)).

If the allegation is made directly the OIG, the office may defer the inquiry to the awardee institution (14 CFR § 1275.103(b)). Depending on what the inquiry shows, the OIG may launch a formal investigation. The investigation may involve the review of files, documents and other evidence, interviews with parties and witnesses, and the participation of outside consultants and experts (14 CFR § 1275.105). An investigation report should be issued within 120 days of the start of the investigation (14 CFR § 1275.105(a)).

At the conclusion of the investigation proceedings, the OIG must issue a report that includes recommended findings as to whether research misconduct has occurred. If the OIG recommends a finding that research misconduct occurred, it must also make recommendations for appropriate administrative actions (14 CFR § 1275.105 (e) and (f)).

ADDITIONAL RELEVANT POLICIES AND RESOURCES 9

The policy incorporates a significant number of other relevant policies including, but not limited to:

- NASA Policy Directive (NPD) 1000.0A: NASA Governance and Strategic Management Handbook
- > NPD 1080.1: Policy for the Conduct of NASA Research and Technology
- > NPR1080.1, Requirements for the Conduct of NASA Research and Technology
- > 14 CFR § 1275: Research Misconduct
- NPR 3335.1: Internal Placement of NASA Employees
- > 5 CFR § 300.102: Employment Practices
- > NPD 1000.0A: NASA Governance and Strategic Management Handbook
- > NPR 7120.8: NASA Research and Technology Program and Project Management Conduct
- > NPR 2200.2: Requirements for Documentation, Approval, and Dissemination of NASA Scientific and **Technical Information**
- > 14 CFR § 1213: Release of Information to News and Information Media
- > Guidebook for Proposers Responding to a NASA Research Announcement or Cooperative Agreement Notice
- > Science Mission Directorate Policy Document (SPD)-01: <u>Handling Conflicts-of-Interest for Peer Reviews</u>
- > SPD-05: Preventing Financial Conflicts for IPA Employees (not publicly available)
- > Human Research Program (HRP)-47053: Science Management Plan

RELEVANT CASES AND OUTCOMES 10

The Handbook states the NASA SIO will post an annual report, with case summaries and outcomes, on the OCS website (Handbook § 7(B)). However, a report has yet to be published.

NOTES

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CSLDF provides free counsel to scientists with legal questions pertaining to their work. Contact us at **(646) 801-0853** or email **lawyer@csldf.org** to arrange a free and confidential consultation with an attorney.



The Climate Science Legal Defense Fund (CSLDF) works to protect the scientific endeavor by helping defend climate scientists against politically and ideologically motivated attacks. CSLDF is a non-profit organization under section 501(c)(3) of the Internal Revenue Code.

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